

CLAIMS:

1. Actuator for a magneto optical recording apparatus, comprising:
an actuator base;
a platform;
at least one writing coil supported by said platform;
a plurality of spring wires movably coupling said platform to said actuator base;
wherein at least one of said spring wires is electrically conductive and is connected in series
with said writing coil such as to effectively act as conductor for writing coil drive signals.
2. Actuator according to claim 1, further comprising at least one actuator coil
supported by said platform;
 wherein at least one of said spring wires is electrically conductive and is
connected in series with said actuator coil such as to effectively act as conductor for actuator
coil drive signals.
3. Actuator according to claim 2, wherein at least one of said spring wires
effectively acts as common conductor for writing coil drive signals as well as actuator coil
drive signals.
4. Actuator according to claim 3, wherein:
- a first electrically conductive spring wire is coupled to a first terminal of said writing coil,
and to a first terminal of a focus actuator coil, and to a first terminal of a tracking actuator
coil;
- a second electrically conductive spring wire is coupled to a second terminal of said writing
coil;
- a third electrically conductive spring wire is coupled to a second terminal of said focus
actuator coil;
- a fourth electrically conductive spring wire is coupled to a second terminal of said tracking
actuator coil.

5. Actuator according to claim 3, wherein:

- a first electrically conductive spring wire is coupled to a first terminal of said writing coil, and to a first terminal of a first actuator coil;
- a second electrically conductive spring wire is coupled to a second terminal of said writing coil, and to a first terminal of a second actuator coil;
- a third electrically conductive spring wire is coupled to a second terminal of said first actuator coil;
- a fourth electrically conductive spring wire is coupled to a second terminal of said second actuator coil.

6. Actuator according to claim 3, wherein:

- a first electrically conductive spring wire is coupled to a first terminal of said writing coil, and to a first terminal of a first actuator coil;
- a second electrically conductive spring wire is coupled to a second terminal of said writing coil, and to a second terminal of said first actuator coil.

7. Actuator according to claim 6, wherein:

- a third electrically conductive spring wire is coupled to a first terminal of a second actuator coil;
- a fourth electrically conductive spring wire is coupled to a second terminal of said second actuator coil.

8. Actuator according to claim 6, wherein:

- said second electrically conductive spring wire is also coupled to a first terminal of a second actuator coil;
- a third electrically conductive spring wire is coupled to a second terminal of said second actuator coil.

9. Actuator according to any of claims 3-8, further comprising a filter mounted

on said platform, the filter comprising:

- an input coupled to said at least one common conductor;
- at least one first output coupled to said at least one actuator coil;
- at least one second output coupled to said at least one writing coil;

wherein said filter is adapted to substantially pass relatively low-frequency signals to said first output and to substantially pass relatively high-frequency signals to said second output.

10. Actuator according to claim 9, wherein said relatively low-frequency signals are in the order of about 10 kHz and wherein said relatively high-frequency signals are in the order of about 100 MHz.

11. Actuator according to claim 9 or 10, wherein said filter comprises a filter capacitor, connected in series between a first input terminal and a first terminal of the second output, and wherein a first terminal of the first output is preferably connected to said first input terminal.

12. Actuator according to claim 11, wherein a first transition frequency is defined by the parallel combination of said filter capacitor and the inductance value of said actuator coil;
wherein a second transition frequency is defined by the parallel combination of the inductance value of said actuator coil and the parasitic capacitance of said actuator coil;
wherein said second transition frequency is higher than said first transition frequency.

13. Actuator according to claim 12, wherein said first transition frequency is higher than 1 kHz, preferably higher than 10 kHz, and more preferably higher than 40 kHz, and most preferably in the range of 40-300Hz;
and wherein said second transition frequency is lower than 100 MHz, preferably lower than 10 MHz, more preferably lower than 5 MHz, and most preferably in the range of 1-4 MHz.

14. Actuator according to any of claims 11-13,
wherein said actuator coil has a resistance value substantially in the order of about 8.5 k Ω ;
wherein said actuator coil has a parasitic capacitance value substantially in the order of about 31 pF;
and wherein said filter capacitor has a capacitance value in the range of 8 - 300 nF, preferably substantially in the order of about 10 nF.

15. Actuator according to claim 14,
wherein said actuator coil has an inductance value substantially in the order of about 50 μ H;

and wherein said at least one writing coil has a capacitive impedance substantially in the order of about 0.32 pF parallel to an inductive impedance substantially in the order of about 18 nH in series with a resistive impedance substantially in the order of about 2.5 Ω .

16. Magneto optical recording apparatus, comprising:
receiving means for receiving and rotating a magneto-optically recordable disc;
controllable optical means for directing a controlled laser beam to a portion of the disc;
controllable magnetizing means for applying a controlled magnetic field to an area of the disc;
and an actuator according to any of the previous claims.
17. Filter for use in an actuator according to any of claims 1-15, suitable for mounting on a movable platform of such actuator, the filter comprising:
an input;
at least one first output for coupling to an actuator coil;
at least one second output for coupling to a writing coil;
the filter being suitable for receiving actuator coil drive signals as well as writing coil drive signals at its input, for separating said signals from each other, and for outputting said actuator coil drive signals at said first output and for outputting said writing coil drive signals at said second output.
18. Filter according to claim 17, comprising:
a filter capacitor, connected in series between a first input terminal and a first terminal of the second output;
said filter capacitor preferably having a capacitance value substantially in the order of about 10 nF;
the filter preferably having a first terminal of the first output connected to said first input terminal.